

# A new genus and two new species of Muscini from South Africa. (Diptera: Muscidae).

by

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Malloch (1923) demonstrated that the genus *Orthellia* R.-D. could be separated from *Pyrellia* R.-D. and other genera of metallic Muscini by the presence of a tuft of black setulae on the posterior part of the suprasquamal ridge (parasquamal tuft). Since then most authors have followed Malloch in defining the genus. Curran (1935) in his study of the Ethiopian species of *Orthellia* drew attention to the fact that, in all species but two, the infra-alar bulla was haired. He suggested that it might be better to remove the exceptions, *prima* Curran and *distincta* Villeneuve (= *gemma* Bigot), from *Orthellia*. Karl (1935) used the character of a haired infra-alar bulla to define the genus *Orthellia* but probably did not know that apparent exceptions existed.

In the course of a study of the genus *Orthellia* in the Ethiopian Region, I discovered that the phallosome is very distinct in species with the infra-alar bulla setulose (Fig. 1), differing from that of members of all other genera of Muscini known to me. The phallosome of the three species with the infra-alar bulla bare is quite distinct, less specialized, resembling the form found in *Morellia* and other genera (Fig. 2). Because of these findings I have decided to remove these species to a new genus.

The genus *Orthellia* can, therefore, be recognized by the setulose infra-alar bulla since the character is found in no other genus of the Muscini, as far as I know.

## CURRANOSIA new genus.

Metallic blue or green flies of moderate size. Suprasquamal ridge with a parasquamal tuft of black hairs; infra-alar bulla bare; pteropleura haired on the upper part. Fourth wing-vein bent forward in an even curve, not angularly bent. Lower squama truncated behind. Phallosome as in fig. 2.

*Type species: Orthellia pilarara* Snyder, 1951.

*Geographical distribution:* Ethiopian Region.

*Known species: Pyrellia gemma* (Bigot), 1878 (= *Pyrellia arctifrons* Stein, 1913 *n. syn.*, = *Pyrellia distincta* Villeneuve 1916). *Orthellia prima*

Curran 1935; *O. pilarara* Snyder. These species can be separated with the aid of Snyder's (1951) key.

The embossed, enlarged and polished frontal triangle found in *C. gemma* and *C. prima* is not present in *C. pilarara*, demonstrating that it is, at most, a subgeneric character.

I have examined the type of Stein's *Pyrellia arcifrons* and have found it to be conspecific with *gemma* Bigot.

### **Morellia natalensis n. sp.**

*Male*: General body colour black with white dusted ornamentation. Length: about 6.5 mm. Head: Frons ratio 0.033—0.038 mean 0.035 (5 specimens). Inclinate row of about 20 parafrontal setules which are strongest in front; the row ends at a point just in front of the upper ocelli.

Thorax: Mesonotum with the following pattern of white dust, which is best seen from behind: a broad median vitta is well defined in front, but very faint behind the suture where it runs into an area of thin dust bounded posteriorly by the scutellar base, laterally by the *dc* rows, and extending forward to just in front of the last but one *dc* pair; a very thin and faint vitta through each *dc* row; an elongated area of white dust above the wing root; an area of heavy white dust on the humeral callosity and notopleura. Scutellum with a white dusted area on each side. Pleurae thinly dusted, particularly on the sternopleura.

*dc*, 0 + 4, the anterior two pairs of *post dc* weak; *pra* well developed; *stpl*, 1 + 2; *beret* and area above the hind coxa with fine hairs; prosternum bare.

Legs: All black.  $T_1$  without outstanding submedial setae;  $f_2$ : apically "shelved", armed with several outstanding apical setae (fig. 3);  $t_2$  basally notched, and with a basal row of about 15 short setae which ends at about 0.5; about 3 short *pd* setae in the apical half, 2 *p* setae in the basal half and 2 *pv* in apical half.  $F_3$ : *av* row of rather weak setae with only the apical group of 3 rather stronger; the row less strong than in *calyptata* Stein (= *bispinosa* Malloch, n. syn.).  $T_3$  with (usually) 3 short (less than the diameter of the tibia) *av* setae, 1 at 0.6, 1 just basad of this and 1 at about 0.8; an *ad* row increases from the base to 0.6 where it ends; 1—2 very small *pv* at about 0.8: usual strong calcar at about 0.75.

### **EXPLANATIONS OF FIGURES**

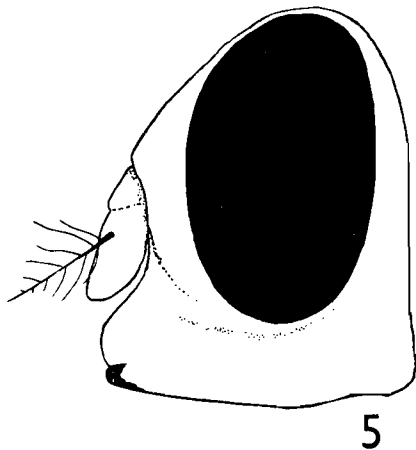
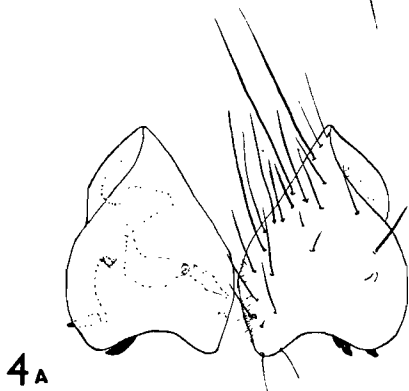
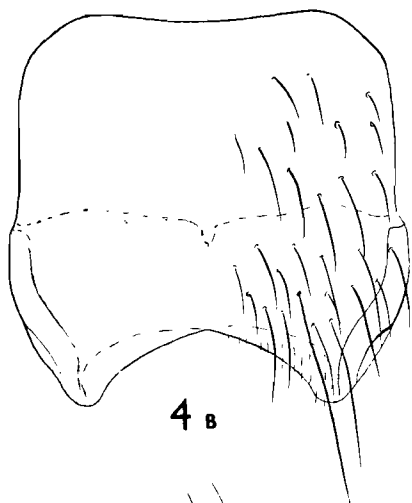
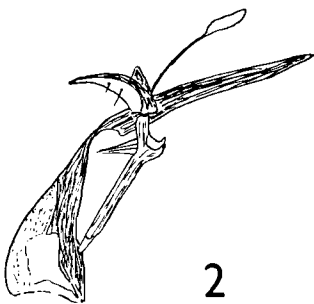
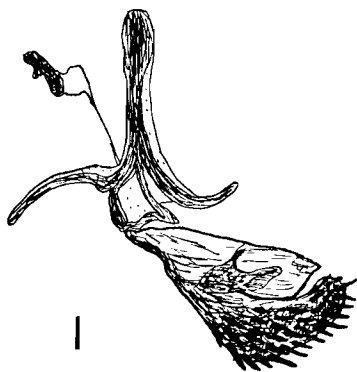
Fig. 1 - Phallosome, *Orthellia nudissima* (Lw.).

Fig. 2 - Phallosome, *Curranosia pilarara* (Snyder).

Fig. 3 - Apex of mid femur, *Morellia natalensis* n.sp. Male (dorsal view).

Fig. 4 - (a) Cerci of the male terminalia; (b) 4th sternite, *M. natalensis* n.sp. Male.

Fig. 5 - Head in profile, *Pyrellia stuckenbergi*, n.sp.



Wings: Somewhat smoky, especially towards the base; *r-m* at 0.52 of discal cell;  $r_{4+5}$  haired above on node to based of *r-m*, and with hairs on the node below. Stem vein with a row of fine hairs on the posterior part of the basal section. Squamae yellowish smoky with the borders pale, and with the connecting area between the upper and lower parts yellow. (This is probably variable as in *calyptrata*).

Abdomen: Tergite 1 undusted above but with white dust in the lateral posterior corners; tergite 2 with medio-lateral anterior white spots connected to areas of white dust along the anterior margin below; tergite 3 with 2 medio-lateral, isolated white spots and with small anterior areas of white dust below; tergite 4 generally dusted dorsally but showing a shifting pattern; lower lateral area more densely white dusted generally. Sternites 1—3 white dusted; sternite 4 dusted on the anterior part only. Male genitalia: very similar to those of *M. calyptrata* (fig. 4).

*Female*: Head: Frons ratio: 0.270—0.291, mean 0.278 (5 specimens). Squamae: lower squama smoky with a pale margin; connecting area usually suffused with pale yellow. Legs:  $t_1$  without outstanding submedian setae;  $f_2$  with a prominent submedian *a* seta, stout *p* and *pd* preapicals and a short *p* row of setulae in the apical 0.25;  $t_2$  with about 4 *p* setae and 1 more or less *pv* at 0.75;  $f_3$  with an *ad* row along the whole length, a rather sparse *av* row consisting of short setae in the basal half and about 6 stronger ones in the apical half, and a sparse *pv* row of short setae;  $t_3$  with 2—3 short (less than the tibial diameter) *av* setae, 1 at about 0.5, the second at about 0.6 and the last at about 0.8; usually a few short *ad* in the basal third forming a row and an isolated stronger seta at about 0.6 (just beyond the median *av*); and a short *pd* at 0.25 besides the calcar at 0.75.

Holotype: A male, Ingeli Forest, near Harding, Natal, Leg. H. E. Paterson 16.II.1954. (South African Institute for Medical Research Collection).

Paratypes: 6 ♂♂ and 1 ♀, same data as for the holotype; 5 ♀♀, same locality, leg. J. Muspratt, III.1951.

Other material: 1 ♂, Woodbush, near Magoeba's Kloof, Northern Transvaal, leg. D. H. S. Davis, 10.VII.1955; 1 ♂ numerous ♀♀, Storms River, Eastern Cape, leg. F. Zumpt, 31.XII.1953; 1 ♀, Magoeba's Kloof, Northern Transvaal, leg. J. Muspratt, IV.1953.

This species can be distinguished from *M. nilotica* Loew by the unarmed  $t_1$  in the male and the colour of the squamae in both sexes; from *prolectata* (Walker) it can be distinguished by its bare prosternum; from *calyptrata* Stein (the type of which I have examined) it differs, in the male, in lacking the two very long submedian *av* setae, and, in the female, in possessing, usually, 3 *av* setae on  $t_3$ , whereas there are only two in *calyptrata*, at 0.5 and 0.6: these *av* setae are somewhat longer in the latter species, equalling or exceeding the tibial diameter while they are always less than this diameter in *natalensis*.

### ***Pyrellia stuckenbergi* n. sp.**

*Female*: Length: 5.5 mm. Head in profile as in fig. 5. Frons at vertex

0.37 of the head width; parafacialia 1.5 times the width of the third antennal segment; buccae about 0.2 of an eye height. Buccae, parafacialia, and lower half of the parafrontalia white dusted; the upper half of the parafrontalia metallic blue-green. Palpi, antennae and interfrontalia black. About 10 pairs of inclinate parafrontal setae, 2 proclinate parafrontal setae on each side, in front of the ocelli an outwardly directed reclinate parafrontal present at level of ocelli. Inner and outer verticals and ocellars well developed; post verticals small.

Thorax blue-green, thinly white dusted on sternopleura and mesopleura and with a dense white median patch on the anterior part of the *prst.* area. Anterior thoracic spiracles black.

Prosternum bare; *spl*, 1 + 3; propleura with 2 setae and 3 setulae; 1 prostigmal and about 4 hairs; mesopleura with an *ad* and a vertical row of 7—8 setae all of which are reclinate except the most dorsal which is proclinate; *dc*, 2—4, all well developed; *pra* distinct; *sa*, 2; *ia*, 1; *posta*, 2.

Legs: Femora metallic, thinly dusted; tibiae and tarsi black.  $T_1$ : without submedian setae.  $f_2$ : with an *a* row from base to about 0.6, increasing in strength from base to apex; *p* and *pd* pre-apicals, and a distinct *av* at 0.3.  $T_2$ : with an *ad* at 0.6, a strong *pv* at 0.75 and 3—4 *pd*.  $T_3$  with 2 short *av*, 1 at 0.5 and the other at 0.65; a row of about 6 *ad* terminating at about 0.75; a strong calcar at about 0.75, and a row of *pd* setules.

Wings hyaline and generally haired except for 1—2 narrow strips at the base of the discal cell;  $r_{4+5}$  haired on node above and below and with 1—2 hairs at middle of the section before *r—m* above. The usual setula present at the apex of the stem vein below. Subcostal sclerite bare: *r—m* at about 0.55 of discal cell. Squamae white.

Abdomen: metallic blue-green, with some thin white dust on either side at the lateral extremities of the tergites. Holotype: a female, Cathedral Peak area (7700 feet), Drakensberg Mountains, Natal; leg. B. Stuckenberg, 20.III. 1955. (S. A. Institute for Medical Research Collection).

I have described this species from a single female since it is very distinct, it is from a rather inaccessible area, and since it is desirable to have a forthcoming study of the genus as complete as possible.

The shape of the head in profile distinguishes this species from all the known Ethiopian species of this genus. Little is known of *Pyrellia aethiopsis* Corti, however, but according to Séguy (1952) it has the subcostal sclerite setulose, unlike the present species.

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